

2017

LOCAL HAZARD MITIGATION PLAN



PREPARED BY:
CITY OF CATHEDRAL CITY
6/1/2017

CONTACT INFORMATION

CITY OF CATHEDRAL CITY

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PLAN ADOPTION/RESOLUTION

Cathedral City will submit plans to Riverside County Emergency Management Department who will forward to California Governor's Office of Emergency Services (CAL OES) for review prior to being submitted to the Federal Emergency Management Agency (FEMA). In addition, we will wait to receive an "Approval Pending Adoption" letter from FEMA before taking the plan to our local governing bodies for adoption. Upon approval, Cathedral City will insert the signed resolution.

EXECUTIVE SUMMARY

The purpose of this local hazard mitigation plan is to identify the County's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences and set goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and man-made hazards.

The plan was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to achieve eligibility and potentially secure mitigation funding through Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance, Pre-Disaster Mitigation, and Hazard Mitigation Grant Programs.

Riverside County's continual efforts to maintain a disaster-mitigation strategy is on-going. Our goal is to develop and maintain an all-inclusive plan to include all jurisdictions, special districts, businesses and community organizations to promote consistency, continuity and unification.

The County's planning process followed a methodology presented by FEMA and CAL-OES which included conducting meetings with the Operational Area Planning Committee (OAPC) coordinated by Riverside County Emergency Management Department (EMD) comprised of participating Federal, State and local jurisdictions agencies, special districts, school districts, non-profit communities, universities, businesses, tribes and general public.

The plan identifies vulnerabilities, provides recommendations for prioritized mitigation actions, evaluates resources and identifies mitigation shortcomings, provides future mitigation planning and maintenance of existing plan.

The plan will be implemented upon FEMA approval.

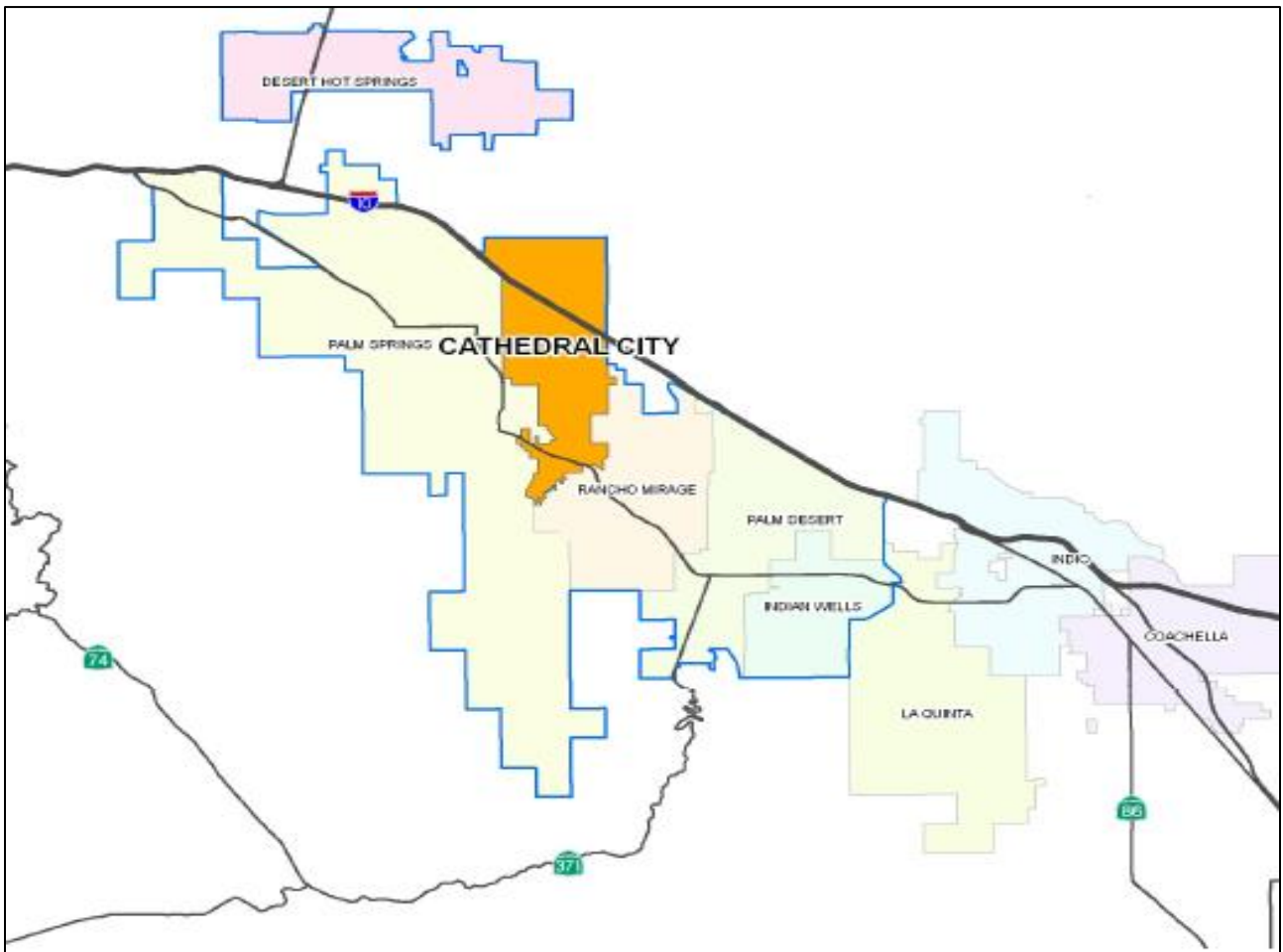
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SECTION 1.0 - COMMUNITY PROFILE

1.1 CATHEDRAL CITY MAP



1.2 GEOGRAPHY AND CLIMATE DESCRIPTION

Cathedral City is a charter city in Riverside County in the Coachella Valley of California. It is approximately 24 square miles in area and is 64 miles east of the County seat, the City of Riverside. All borders of Cathedral City are within Riverside County. The Union Pacific Railroad and Interstate Highway 10 both run through the northern-most portion of the City. The Santa Rosa Mountains border the southern-most portion of the city.

Cathedral City's climate can be described as arid most of the year, with extreme heat in excess of 120 degrees Fahrenheit anytime from June through September, and colder temperatures as low as 25 degrees Fahrenheit from December through February. Our average rainfall is less than three inches per year. Temperatures and rainfall for Cathedral City are typical of that of the rest of the Coachella Valley (eastern Riverside County).

1.3 BRIEF HISTORY

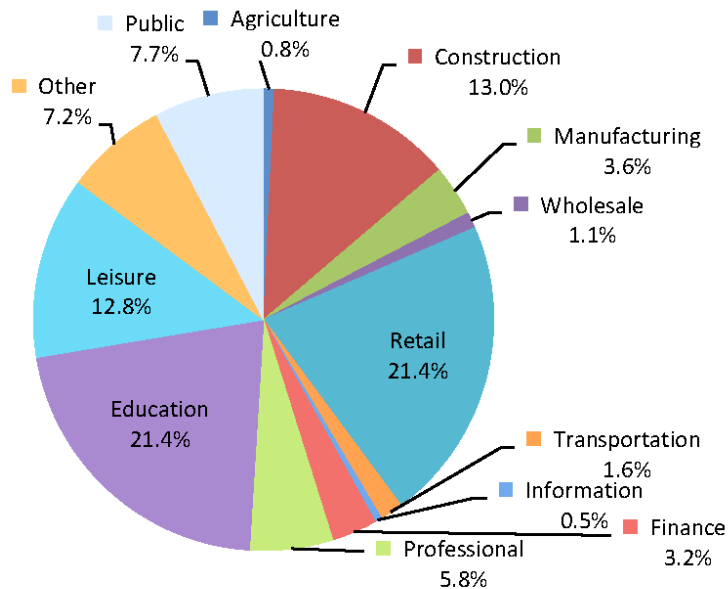
The City of Cathedral City was established in 1925 and incorporated in 1981. Strategically located, with borders on both sides of Interstate 10, Cathedral City is a haven for expanding and relocating businesses. Cathedral City ranks in the top three cities in the Coachella Valley in population. Businesses view the region as a triangle of opportunity between Los Angeles and San Diego with Coachella Valley situated inland, approximately equal distances from each. This triangle of commercial businesses, light industry, and professional services is expanding and becoming one metropolis of continued growth.

1.4 ECONOMY DESCRIPTION

Cathedral City is primarily a bedroom community. Development in the City is 51.4% residential, 15.1% commercial, and 6.4% industrial, which limits the sales and property tax base. The largest employment fields for Cathedral City residents are hospitality and light industrial, serving the region around Cathedral City. The largest employer is the Cathedral City Automotive Group, which collectively provides work for 1,100 employees. The City annexed an area at its northernmost portion of the City (toward Desert Hot Springs) in 2011. More recently, in 2014, Cathedral City has accepted a Sphere of Influence that comprises more than 200 acres of property in the unincorporated area called Thousand Palms, as well as in the incorporated city of Palm Desert.

1.4 JOBS BY SECTOR

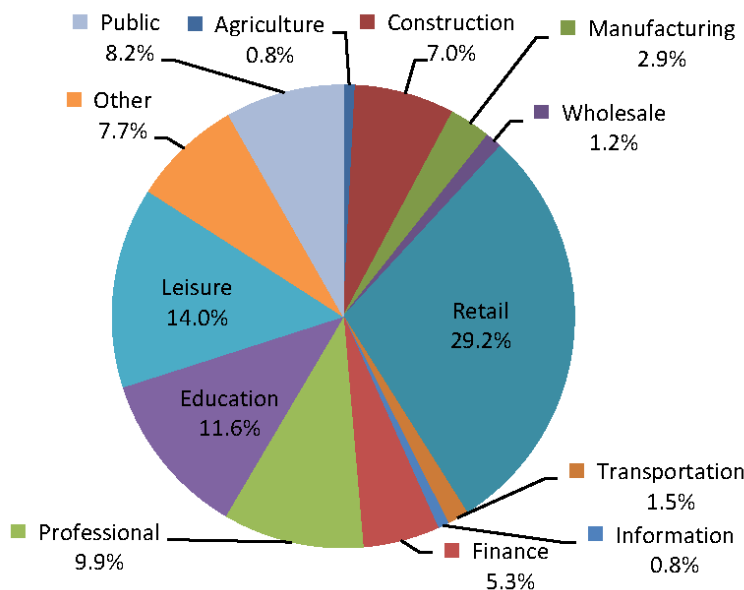
Jobs by Sector: 2007



Sources: California Employment Development Department, 2007; InfoGroup; and SCAG.

- From 2007 to 2013, the share of Retail jobs increased from 21.4 percent to 29.2 percent.
- See Methodology Section for industry sector definitions.

Jobs by Sector: 2013

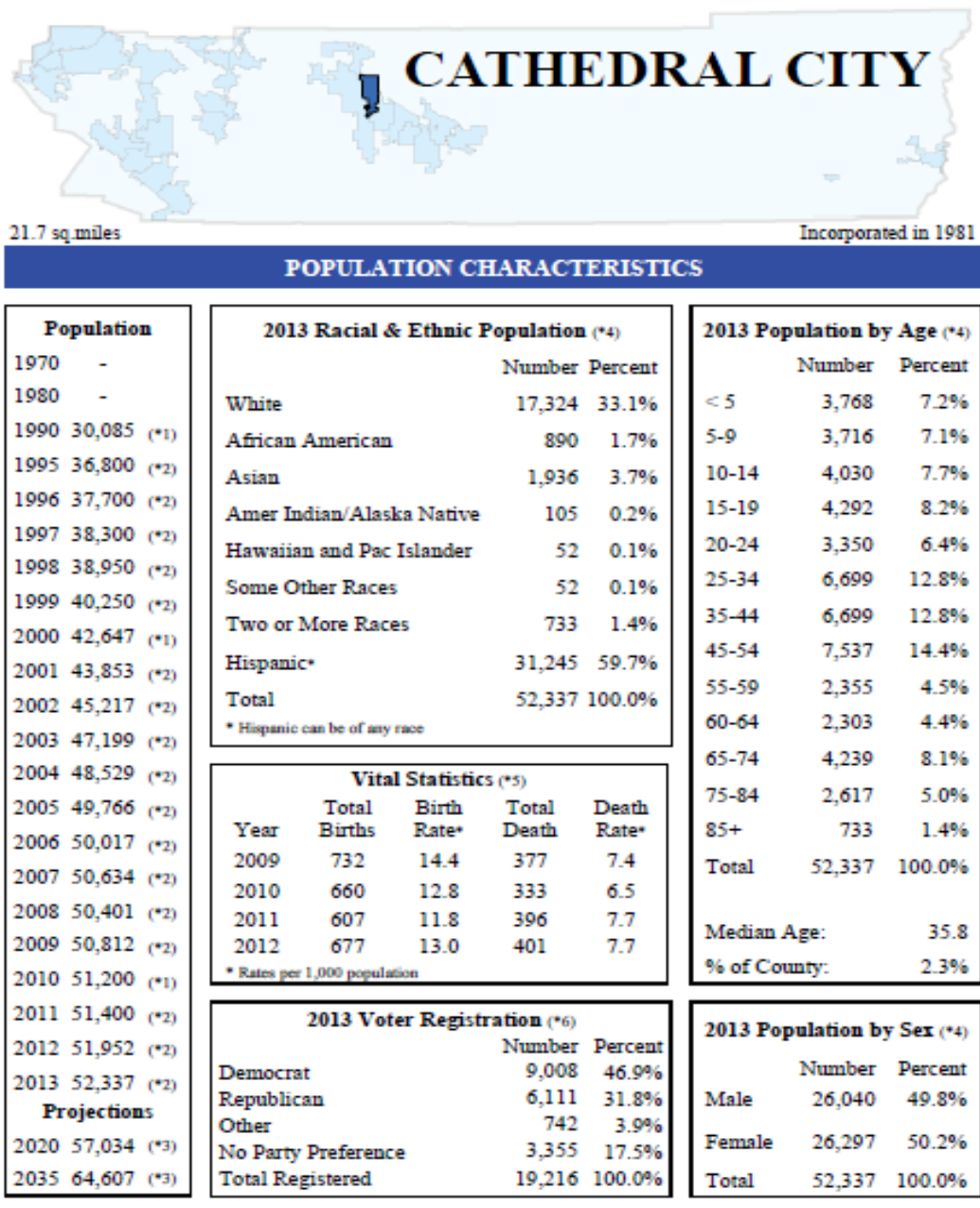


Sources: California Employment Development Department, 2014; InfoGroup; and SCAG.

- In 2013, the Retail sector was the largest job sector, accounting for 29.2 percent of total jobs in the city.
- Other large sectors included Leisure (14 percent), Education (11.6 percent), and Professional (9.9 percent).

1.5 POPULATION AND HOUSING

The 2016 U.S. Census estimated the population of Cathedral City at 54,261. This was an increase in the population of 6% over 2010 Census population estimates.



Sources: (*1) Decennial Census, US Census Bureau

(*2) January Estimate, CA State Department of Finance

(*3) Riverside County Projections (RCP10)

(*4) American Community Survey 2007-2011 5-Year Estimates and CA State Department of Finance

(*5) Riverside County Department of Public Health

(*6) California Secretary of State, February 2013

Note: Totals might not add up due to rounding.

Comparing data between years may be problematic because of incorporations & annexations.

Projections are based on April 1, 2010 boundary; therefore current or future dwelling units in the annexed area may not be reflected in these projections.

1.6 BRIEF STATEMENT OF UNIQUE HAZARDS

Cathedral City continues to experience flooding and road closures at the low water crossings which include Cathedral Canyon Wash and the Vista Chino Wash. The Vista Chino Wash is within the city limits of Palm Springs, although when closed this impedes traffic flow traveling both east and west through Cathedral City.

The following areas within Cathedral City continue to flood during rain events due to poor drainage, 68000 region of Ramon Rd., Varner Rd., Vista Chino x Horizon, Date Palm x Baristo Rd. and Vista Chino x Landau Blvd. Temporary mitigation continue to include barricading, sandbagging, and infrastructure repairs.

The National Weather Service issues several high wind warnings annually throughout the Coachella Valley due to the hazardous winds and extreme blowing sand. The extreme blowing sand a poor visibility mostly effects the northern portion of Cathedral City to include Interstate 10.

On East Palm Canyon, east of Date Palm Dr., there is a steep escarpment 50 to 75 ft. which abuts to the south portion of East Palm Canyon. This hazard is a concern during earthquake activity. Motorists traveling through our city on East Palm Canyon could be in danger due to falling rock. This has occurred with seismic activity in the past. In the event of a significant earthquake, traffic flow would either be impeded or completely shut down to motorists traveling either east or west thru Cathedral City.

1.7 DEVELOPMENT TRENDS AND LAND USE

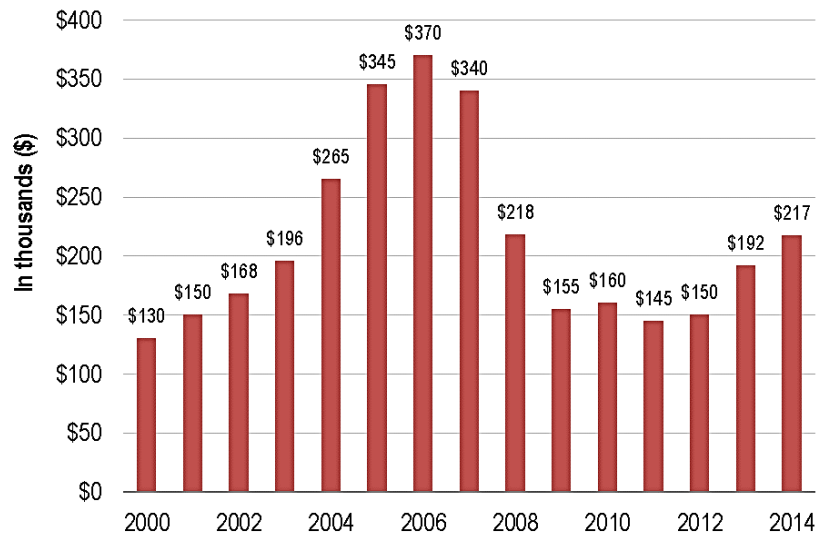
The median price of a single family home in Cathedral City in 2010 was \$160,000, and increased to \$217,000 in 2014 (a 27% increase in cost). However, the median household income of Cathedral City residents in 2010 was \$38, 872 and only increased 3.4% by 2015.

HOUSING & HOUSEHOLD CHARACTERISTICS

Sources: (*1) Decennial Census, US Census Bureau
 (*2) January Estimate, CA State Department of Finance
 (*3) Riverside County Projections (RCP10)
 (*4) DataQuick Reports
 (*5) US Department of Housing & Urban Development, State of the Cities Data Systems
 Note: Totals might not add up due to rounding.
 Comparing data between years may be problematic because of incorporations & annexations.
 Projections are based on April 1, 2010 boundary; therefore current or future dwelling units in the annexed area may not be reflected in these projections.

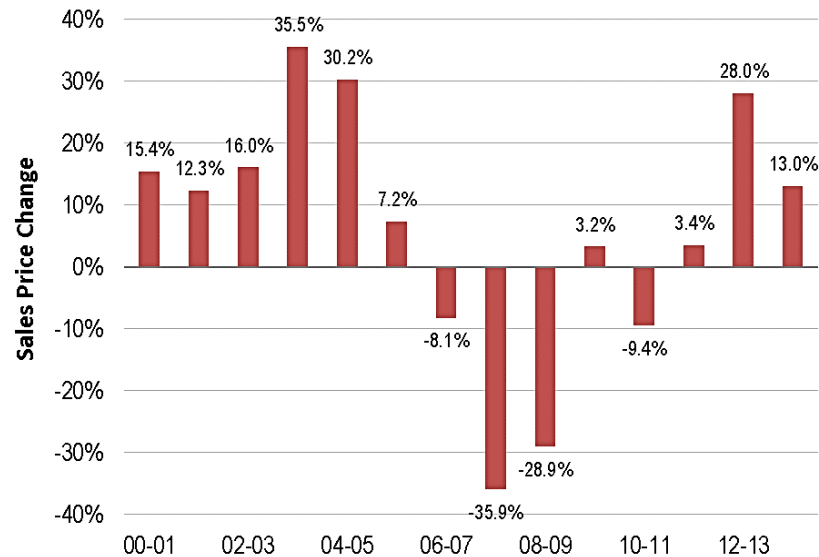
Home Sales Prices

Median Home Sales Price for Existing Homes: 2000 - 2014 (in \$ thousands)



Source: MDA Data Quick, 2014

Annual Median Home Sales Price Change for Existing Homes: 2000 - 2014



Source: MDA Data Quick, 2014

- Between 2000 and 2014, the median home sales price increased 66.9 percent from \$130,000 to \$217,000.
- Median home sales price increased by 35.6 percent between 2010 and 2014.
- In 2014, the median home sales price in the city was \$217,000, \$73,000 lower than that in the county overall.
- Note: Median home sales price reflects resale of existing homes and provides guidance on the market values of homes sold.
- Between 2000 and 2014, the largest single year increase was 35.5 percent.

**Table III-2
City of Cathedral City
Land Use Acreage Summary (Post 2009)**

Land Use Category	Density	Acres in City	% of City Acres
HR Hillside Reserve	1 du/20ac	542	3.9%
RE Estate Residential	0-2 du/ac	463	3.4%
RL Low Den. Residential	2-4.5 du/ac	4,272	31.0%
RR Resort Residential	3-6.5 du/ac	1,387	10.0%
RM Med. Den. Residential	4.5-10 du/ac	387	2.8%
RH High Den. Residential	11-20 du/ac	22	0.2%
Residential Subtotal		7,073	51.4%
CG General Commercial		779	5.7%
CN Neighborhood Commercial		34	0.2%
DTC Downtown Commercial		155	1.1%
Commercial Subtotal		968	7.0%
Mixed-Use Neighborhood		384	2.8%
Mixed Use Urban		734	5.3%
Mixed-Use Subtotal		1,118	8.1%
BP Business Park		386	2.8%
I Industrial		494	3.6%
Industrial Subtotal		880	6.4%
P Public/Quasi-Public		419	3.0%
OS-P Open Space-Public		2,176	15.8%
OS-PV Open Space-Private		98	0.7%
OS-W Open Space-Watercourse		758	5.5%
OS-O Open Space-Other		283	2.1%
Open Space Total		3,315	24.1%
Total		13,773	100%

Adopted July 31, 2002
Amended June 24, 2009

Land Use Element
III-11

SECTION 2.0 - PLANNING PROCESS

2.1 LOCAL PLANNING PROCESS

Representatives from Cathedral City departments collaborated on an as-needed basis to identify and prioritize appropriate mitigation strategies. Personnel involved in these meetings included senior management and staff from the list herein. Many of our strategy points have been derived from the City of Cathedral City General Plan. These Stakeholders were invited to participate in this planning process at the request of the Fire Chief.

Planning team members:

- Eric Hauser, Battalion Chief, Fire Department
- Patrick Milos, Director, Community Development Department
- John Correla, City Engineer, Engineering Department
- Robert Rodriguez, City Planner, Planning Department
- Vincent Lopez, Community Development Specialist, Planning Department

2.2 PARTICIPATION IN REGIONAL (OA) PLANNING PROCESS

Additionally, a senior staff member of the Fire Department attended the FEMA G-318 Course: Local Hazard Mitigation Course (April 3-4, 2017), followed up with telephone and in-person collaborating with the Riverside County EMD.

2.3 DATES AVAILABLE FOR PUBLIC COMMENT

The previous version of our LHMP (2012) was posted for public comment via the City's website in April for a 30 day period. The draft 2017 LHMP was placed in public areas of the Cathedral City City Hall for public perusal and input.

2.4 PLANS ADOPTED BY RESOLUTION

Upon approval by FEMA, an Approval Pending Adoption Letter will be issued and presented, together with the Plan, to the Cathedral City City Council in a public meeting for adoption via an official Resolution within one year.

SECTION 3.0 – MITIGATION ACTIONS/UPDATES

3.1 UPDATES FROM 2012 PLAN

The hazards in Cathedral City include the same as much of Riverside County, including earthquake, flooding and fires. Additionally, Cathedral City shares two common hazards with its neighboring cities: The Union Pacific Railroad's primary southern route to and from the rest of the country runs through the north end of the city, as does a natural gas and flammable liquid supply pipeline that serves a large portion of the southern United States.

Cathedral City's western border is less than 300 yards from the runways of the Palm Springs International Airport.

3.2 NEW HAZARDS OR CHANGES FROM 2012

An escarpment along the East Palm Canyon Corridor at the Rancho Mirage city border has been identified as a hazard during and following a major earthquake.

3.3 BRIEF STATEMENT OF UNIQUE HAZARDS

The escarpment along the East Palm Canyon Corridor is unique in that the hillside was modified sometime after the street's creation in the early 30's to accommodate two lanes of paved roadway. Currently, the mostly granite hillside is subject to occasional rockslides, indicating that the granite is loose and will engulf the roadway during and following substantial earthquakes.

3.4 MITIGATION PROJECT UPDATES

Heavy rain can lead to problems with storm drainage and create localized flood problems. According to the City of Cathedral City Storm Drain Master Plan, there are several flooding problem areas in the City. These areas are primarily a result of undersized pipes where the runoff exceeds the pipe capacity even for minor storms, damaged curb and gutters where the flow lines have been disrupted due to raised gutters and other obstructions, or damaged drain pipes.

The damaged lines are non-specific to any particular area of the City. Storm drain pipes are some of the oldest in the Coachella Valley. The undersized lines are located along the Whitewater Channel, and in various traffic arteries in the City (Date Palm Dr., Ramon Rd., Vista Chino, and Varner Rd.)

The areas that have curb and gutter flow line damage are generally in the areas where undersized lines are located. (See Riverside County OA MJHMP)

PROJECT UPDATES:

- The Eagle Canyon Dam Project (Line 41) was completed in 2015. The completion of this project on East Palm Canyon Dr. now provides an added layer of safety from flash floods and mud slides to our residents and visitors.
- Funding has been secured for the low water crossing on Cathedral Canyon Dr., and work is scheduled for fall, 2017.

PROJECT FACT SHEET
Cathedral Canyon Drive Low Water Crossing Replacement
(New Bridge) at the Whitewater River
Federal Project No.: BR-NBIL (504)
City of Cathedral City

Project Location:



Regional Map



Vicinity Map

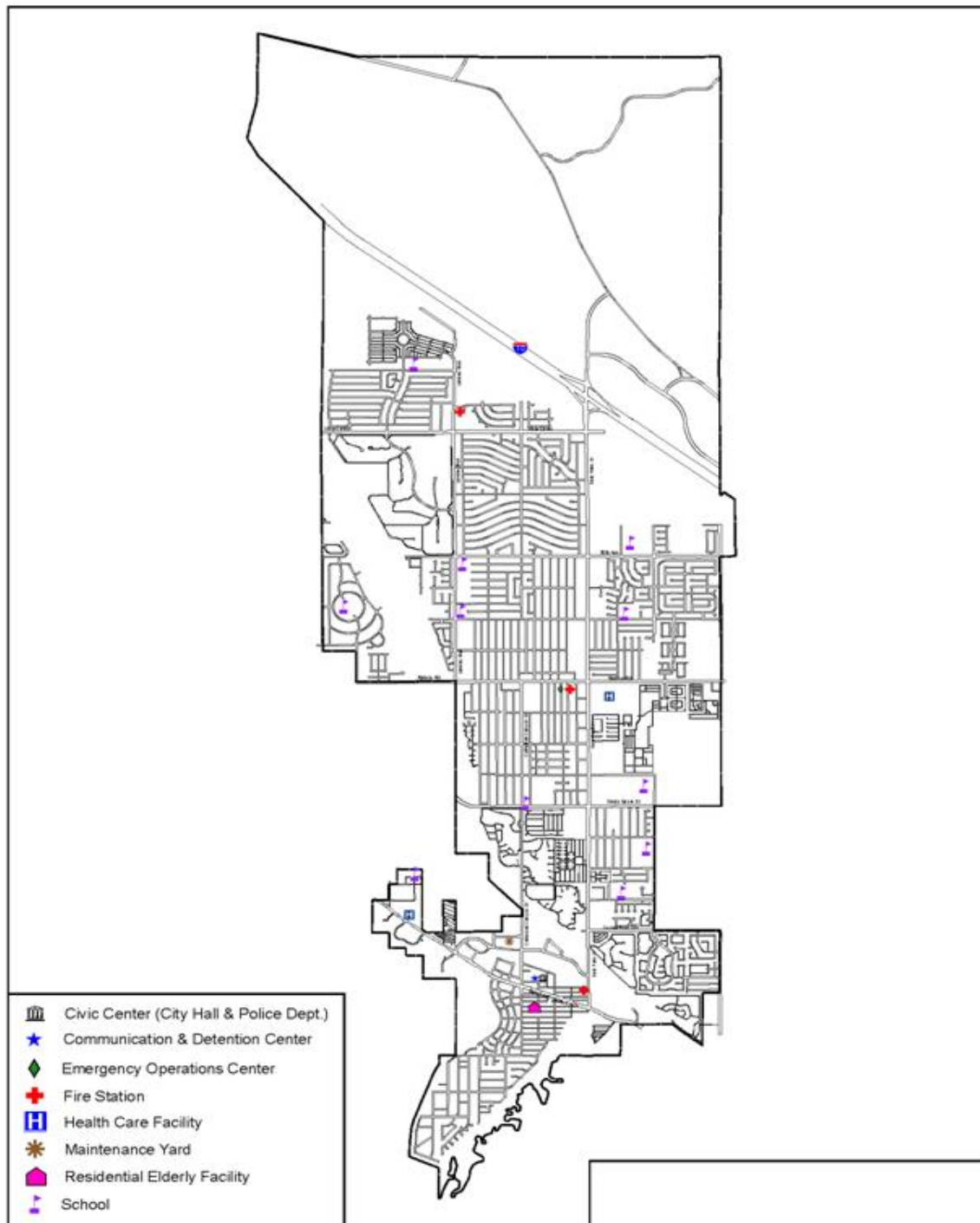
- Funding has been secured for the low water crossing on Vista Chino (this project will occur in the City of Palm Springs jurisdiction).
- Plans are in process to fund an overpass at DaVall Road at Interstate 10 to accommodate increasing traffic on Cathedral City arterial roads. This plan is tied in to the CVAG Transportation Plan.
- The widening of the Date Palm Bridge crossing the Whitewater Channel is being scheduled for the summer of 2017.
- The escarpment at East Palm Canyon, east of Date Palm Drive (at the Rancho Mirage border) has been identified as a hazard. The plan to abate this hazard include reducing the slope of the escarpment and to widen East Palm Canyon (both east and west lanes). Funding for this project has not yet been identified.

SECTION 4.0 - HAZARD IDENTIFICATION AND RISK ASSESSMENT

4.1 CRITICAL FACILITIES AND INFRASTRUCTURES

Critical Facilities Type	Number
Public Safety Dispatch	1
Emergency Operations Center	2
City Hall	1
Fire Stations	3
Water Reservoirs	6
Water Treatment Plants	0
Waste Water Treatment Plants	0
Health Care Facilities	4
Police facility	1
Maintenance Yards	1
Senior Community Centers	3
Schools	10
Radio Repeaters	2

Figure 4.2.2 – Critical Facilities Map, Cathedral City



4.2 ESTIMATING POTENTIAL LOSS

Name of Asset	Replacement Value (\$)	Hazard Specific Info.
City Hall	\$2,817,090	
Fire Station 410/EOC	\$4.5 Million	
Fire Station 411		
Fire Station 412		Underground Storage Tank
Fire Station 413		
Police Department	\$1,076,451	
Palm Springs Unified School District (9 schools)	N/A	
King's School	Not Available	
First School	Not Available	
Calvary Christian School	Not Available	
Tierra Del Sol Senior Housing	Not Available	
Desert Imax Theater	Not Available	
Mary Pickford Theater	Not Available	
Doral Resort	Not Available	

4.3 TABLE REPLACEMENT VALUES

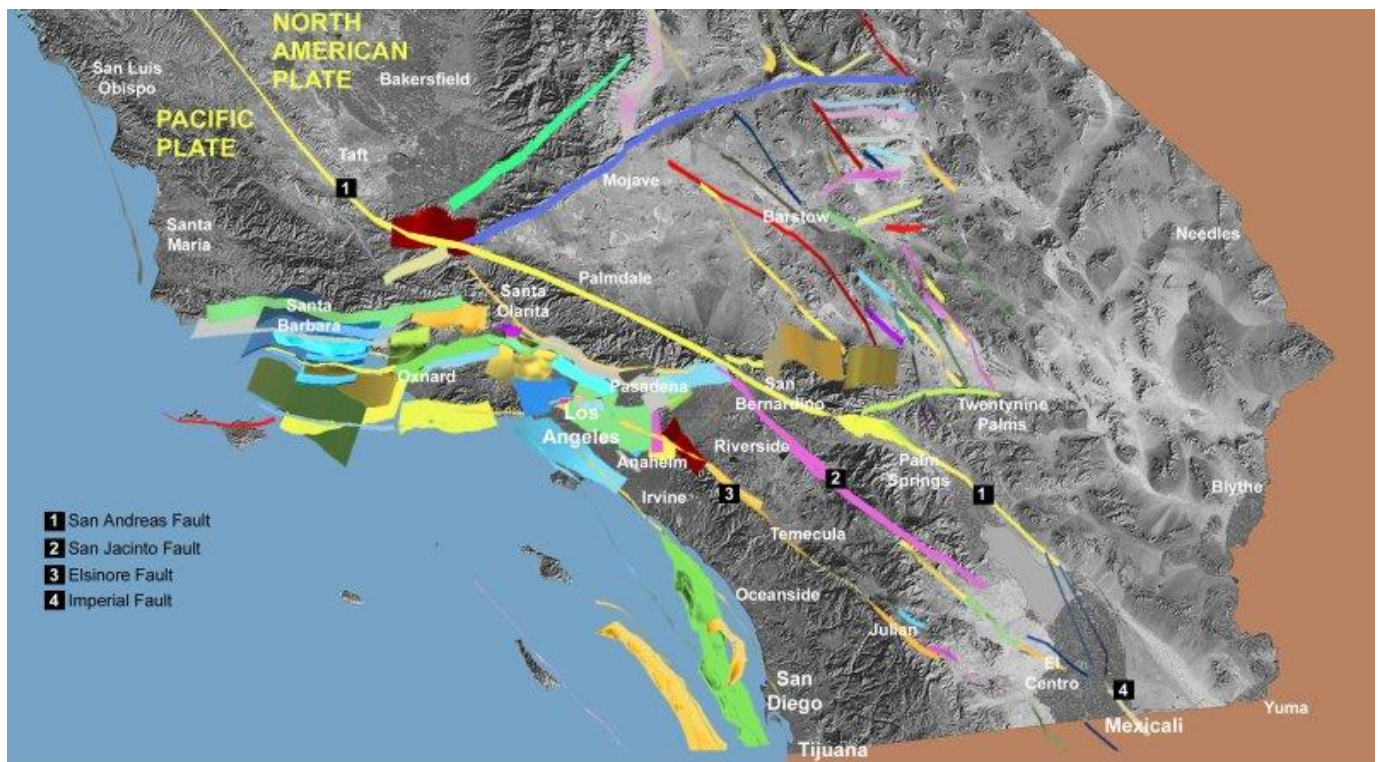
Name of Asset	Replacement Value (\$)	Hazard Specific Info.
Public Safety Dispatch / Police Dept	\$1,076,451	
Fire Stations / EOC	\$4.5M	Underground Storage Tank, Transportation Related Hazard
City Hall	\$2,817,090	
Maintenance Yard	\$922,530	
Radio Repeaters (2)	\$20,000	

4.4 IDENTIFICATION OF RISKS AND VULNERABILITIES

HAZARD	RANKING 1 = High / 4=Low		RANKING 1 - 19
	SEVERITY	PROBABILITY	
EARTHQUAKE	2	3	1
FLOOD	3	1	2
WILD LAND FIRE	3	1	12
OTHER NATURAL HAZARDS			
DROUGHT	2	4	6
LANDSLIDES	1	2	4
INSECT INFESTATION	3	4	13
EXTREME SUMMER/WINTER WEATHER	3	4	5
SEVERE WIND EVENT	2	1	3
AGRICULTURAL			
DISEASE/CONTAMINATION	2	2	16
TERRORISM	1	2	15
OTHER MAN-MADE			
PIPELINE	2	2	11
AQUEDUCT	0	0	19
TRANSPORTATION	2	3	8
POWER OUTAGE	3	3	6
HAZMAT ACCIDENTS	2	3	7
NUCLEAR ACCIDENT	0	0	18
TERRORISM	2	2	9
CIVIL UNREST	2	2	10
JAIL/PRISON EVENT	1	1	17
MEDICAL			
PANDEMIC			14

1. Earthquake - Severity - 2, Probability - 3, Ranking - 1

Cathedral City is located in a Severe Seismic Hazard Zone. The nearest active earthquake faults are located in the northeast portion of the City. The plan area has experienced several noticeable ground movement incidents in the last five years, but no local damage was sustained. (See Riverside County OA MJHMP).



<http://www.earthquakecountry.org/roots/image11839-1791.html>








2. Flood - Severity - 3, Probability - 1, Ranking - 2

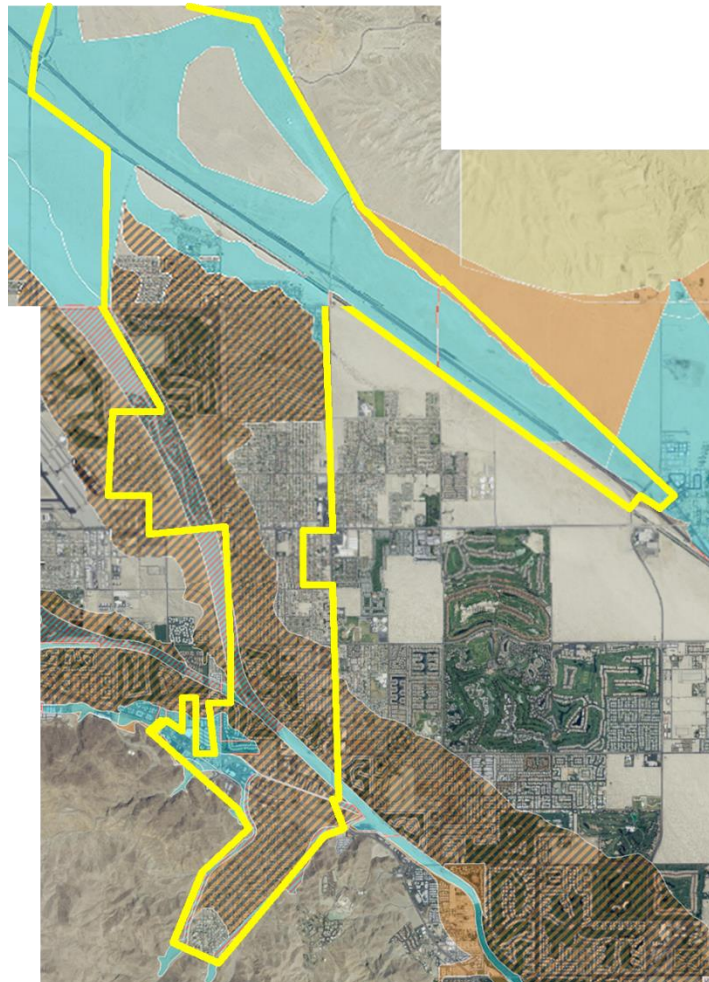
Heavy rain in and around Cathedral City continues to lead to problems with storm drainage and creates localized flood problems. According to the City of Cathedral City Storm Drain Master Plan, there are several flooding problem areas in the City. These areas are primarily a result of undersized pipes where the runoff exceeds the pipe capacity even for minor storms, damaged curb and gutters where the flow lines have been disrupted due to raised gutters and other obstructions, or damaged drain pipes.

The damaged lines are non-specific to any particular area of the City, and our storm drain pipes are some of the oldest in the Coachella Valley. The undersized lines are located along the Whitewater Channel, and in various traffic arteries in the City (Date Palm Dr., Ramon Rd., Vista Chino, and Varner Rd.)

The areas that have curb and gutter flow line damage are generally in the areas where undersized lines are located. (See Riverside County OA MJHMP)

Flood Hazard Zones

-  1% Annual Chance Flood Hazard
-  Regulatory Floodway
-  Special Floodway
-  Area of Undetermined Flood Hazard
-  0.2% Annual Chance Flood Hazard
-  Future Conditions 1% Annual Chance Flood Hazard
-  Area with Reduced Risk Due to Levee



3. Severe Weather: Extreme Wind- Severity 2, Probability 1, Ranking 3

The entire City is subject to extreme wind events with gusts as high as 50 mph; the northern most portion of Cathedral City experience the greatest winds. These events cause hazards in downed power lines, snapped power poles, downed trees, and poor visibility caused by blow-sand.

4. Other Hazards: Escarpment- Severity - 1, Probability- 2, Ranking -4

The escarpment identified in Section 3.2 has the potential of restricting traffic on East Palm Canyon in both directions for an extended period of time. The hazard would be the result of a significant earthquake, although boulders have been known to break free from the hillside at random times without a significant earthquake.

5. Severe Weather: Extreme Heat/Cold- Severity - 3, Probability- 4, Ranking - 5

The City has a cooling station plan that designates the following locations as such:

- Emergency Operations Center
- Senior Center located at 37-171 West Buddy Rogers Avenue.

(See Riverside County OA MJHMP)

6. Drought - Severity - 2, Probability - 4, Ranking - 6

The City of Cathedral City's risks or vulnerabilities from drought do not differ from the rest of the planning area. (See Riverside County OA MJHMP)

Other Hazards

Although ranked of lower planning significance relative to other hazards, the following information about agricultural hazards, dam failure, and transportation hazards/hazardous materials release should still be noted.

7. Agricultural Hazards - Severity -2, Probability – 2 Ranking – 16

Not applicable for Cathedral City; Cathedral City has no land zoned for this purpose. (See Riverside County OA MJHMP)

8. Dam Failure - Severity -1 , Probability -4 Ranking – 15

This event is a low vulnerability hazard due to the recent construction of the Eagle Canyon Dam. (See Riverside County OA MJHMP)

SECTION 5.0 – COMMUNITY RATING SYSTEM

5.1 REPETITIVE LOSS PROPERTIES

Cathedral City does not recognize additional risks or vulnerabilities that differ from the rest of the planning area and do not have any repetitive loss properties.

5.2 NATIONAL FLOOD INSURANCE PROPERTIES

Cathedral City participates in the National Flood Insurance Program (NFIP). We also provide information and links on our website for residents and future residents to determine if their property lies in a Special Flood Hazard Area (SFHA).

- a. ***Describe participation in NFIP, including any changes since previously approved plan.***

The City of Cathedral City participates in the National Flood Insurance Program (NFIP), which makes federally backed flood insurance available for all eligible buildings, whether they are in a floodplain or not.

- b. ***Date first joined NFIP.*** May 1, 1985.
- c. ***Identify actions related to continued compliance with NFIP.*** See summarized actions in section i below.
- d. ***CRS member?*** No
- e. ***CRS class?*** N/A
- f. ***Describe any data used to regulate flood hazard areas other than FEMA maps.***
Environmental Impact Study and Eagle Canyon Dam Study
- g. ***Have there been issues with community participation in the program?*** None identified.
- h. ***What are the general hurdles for effective implementation of the NFIP?*** None identified.
- i. ***Summarize actions related to continued compliance with NFIP.***
1. Sewer and street improvements were procured for homes that were identified as having sub-standard infrastructures. Project completed in 2007.
 2. Continue to provide National Flood Insurance Brochures to residents that reside in flood zone.
 3. The City of Cathedral City regulates construction and development in special flood hazard areas to ensure that buildings will be protected from flood damage. Elevating flood hazard areas with earth (filling) and similar projects are prohibited in certain areas, specifically within designated floodways.
Houses substantially damaged by fire, flood, or any other cause must be elevated to or above the flood level when they are repaired. Specific flood damage prevention regulations may be obtained from the City of Cathedral City Community Development Department and Engineering.
 4. Homeowners and future owners with property in floodplain areas are advised to buy flood insurance, regardless of whether the mortgage is federally backed.

5. The City of Cathedral notifies residents in flood zone areas when the City receives Notice of Map Change Letters.
- j. ***Repetitive Loss Properties*** None identified.

SECTION 6.0 - CAPABILITIES ASSESSMENT

6.1 REGULATORY MITIGATION CAPABILITIES

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections –

- Regulatory Mitigation Capabilities
- Administrative And Technical Mitigation Capabilities
- Fiscal Mitigation Capabilities
- Mitigation Outreach And Partnerships
- Funding Sources

Regulatory Tool	Yes/No	Comments
General plan	Yes	Comprehensive General Plan for the City of Cathedral City, amended in 2009
Zoning ordinance	Yes	CCMC Chapter 9
Subdivision ordinance	Yes	CCMC Chapter 9
Site plan review requirements	Yes	CCMC Chapter 9
Floodplain ordinance	Yes	CCMC 8.24
Other special purpose ordinance (storm water, water conservation, wildfire)	Yes	Storm water: CCMC 13.50.170, 8.24070. Wildfire: CCMC 8.12.050, Ord. 2016-782 (California Fire Code)
Building code	Yes	Ord. 2016-782 (California Building Code)
Fire department ISO rating	Yes	Rating 3/9
Erosion or sediment control program	Yes	AQMD PM10 Compliance
Storm water management program	Yes	City of Cathedral City Storm Drain Master Plan, 2009. The City of Cathedral City's risks or vulnerabilities from drought do not differ from the rest of the planning area.

Capital improvements plan	Yes	Five-year plan; updated annually
Economic development plan	Yes	
Local emergency operations plan	Yes	Emergency Operations Plan, Amended 2015
Flood Insurance Study or other engineering study for streams	Yes	FEMA Flood Insurance Study, 2008

The Cathedral City General Plan reflects the City's long-range aspirations (15-20 years) of physical form and amenity and provides guidance for developmental regulations, such as zoning and subdivision ordinances. Two of the plans goals, in particular, support hazard mitigation. These goals and their policies are included below:

Seismic Hazards: Geotechnical Element

Goals for achieving and maintaining safety from seismic events include a focus on the physical characteristics of the City as related to our geological setting. The rocks and sediments exposed at the surface of the planning area, which can be classified based on their age, include:

- 1) Mesozoic and older (66 million years old and older) rocks in the Santa Rosa Mountains,
- 2) Pleistocene (11,000 to 1.6 million years old) sediments on Edom Hill, Flat Top Mountain, and the northwestern portion of the planning area, and
- 3) Holocene (0-11,000 years old) sediments on the valley floor.

The distribution of these sediments within the planning area is described in detail on page V-1 of the General Plan. Their geologic and hydrologic characteristics, as well as wind erosion, are responsible for a number of geologic hazards and engineering challenges, which are described throughout this element of the General Plan.

Plans to mitigate/minimize eminent destruction and associated loss of life and property during and immediately after a seismic event are outlined on pages V-20 to V-23 of the General Plan.

Flooding and Hydrology Element

Goals for achieving and maintaining safety from flooding events include a focus on the physical characteristics of the City as related to our proximity to manmade channels and natural floodplains.

The General Plan details rainfall, drainage, channel and geotechnical effects on our risk for flood, and plans for flood control. City goals and programs are outlined in detail in pages V-34 to V-36 of the General Plan.

Hazardous and Toxic Materials Element

Goals for achieving and maintaining safety from Hazardous and Toxic Materials include disposal, transportation and management plans as outlined in the General Plan, pages V-57 to V-59.

6.2 ADMINISTRATIVE/TECHNICAL MITIGATION CAPABILITIES

Personnel Resources	Yes/No	Department/Position
Planner/engineer with knowledge of land development/land management practices	Yes	Planning Department
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	City Engineer and Building Official
Engineer with an understanding of natural hazards	Yes	City Engineer and Planning Department
Personnel skilled in GIS	Yes	Planning Department
Full time building official	Yes	Building Official
Floodplain manager	Yes	Planning Department
Emergency manager	Yes	Fire Battalion Chief
Grant writer	Yes	Fire Battalion Chief
GIS Data—Land use	Yes	Planning Department
GIS Data—Links to Assessor's data	Yes	Planning Department & Fire Department
Warning systems/services (Reverse 9-11, outdoor warning signals)	Yes	Fire Department and Dispatch Center

6.3 FISCAL MITIGATION CAPABILITIES

Financial Resources	Accessible/Eligible to Use (Yes/No)	Comments
Community Development Block Grants	Yes	
Capital improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	With Voter Approval
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	Yes	
Incur debt through general obligation bonds	Yes	With Voter Approval
Incur debt through special tax bonds	Yes	With Voter Approval
Incur debt through private activities	No	
Withhold spending in hazard prone areas		

6.4 MITIGATION OUTREACH AND PARTNERSHIPS

Cathedral City maintains fire safety programs in schools and throughout the year at special community events.

Cathedral City Fire Department maintains an Automatic Aid Agreement for fire and emergency medical services with the Riverside County Fire Department, and the Palm Springs Fire Department. Mutual Aid Agreements are also in place with the Riverside County Fire Department and the Palm Springs Fire Department. (See Riverside County OA MJHMP)

The Cathedral City Fire Department hosts Community Emergency Response Training (C.E.R.T.) and Teen C.E.R.T. to the public, regardless of their residency status in Cathedral City.

6.5 FUNDING OPPORTUNITIES

The City of Cathedral City has the same funding opportunities as Riverside County Operational Area. Please refer to the Riverside County Multi-Jurisdictional Hazard Mitigation Plan for list of funding sources available.

SECTION 7.0 - MITIGATION STRATEGIES

7.1 GOALS AND OBJECTIVES

Cathedral City's mitigation goals are outlined in the General Plan. Developments of strategies for mitigation are on-going but include the following existing programs:

❖ **Goal 1:** Provide Protection for People's Lives from All Hazards.

Objective 1.1: Provide timely notification and direction to the public of imminent and potential hazards.

Objective 1.2: Protect public health and safety by preparing for, responding to, and recovering from the effects of natural or technological disasters.

Objective 1.3: Improve community transportation corridors to allow for better evacuation routes for public and better access for emergency responders.

Objective 1.4: Educate residents through handouts and media outlets on natural hazards they may face.

❖ **Goal 2:** Improve Community and Agency Awareness about Hazards and Associated Vulnerabilities That Threaten Our Communities.

Objective: 2.1: Increase public awareness about the nature and extent of hazards they are exposed to, where they occur, what is vulnerable, and recommended responses to identified hazards (i.e. both preparedness and response).

2.1.1: Create/continue an outreach program, provide educational resources, and develop and provide training. Specifically, we will conduct recruitment and training of Community Emergency Response Teams.

❖ **Goal 3:** Improve the Community's Capability to Mitigate Hazards and Reduce Exposure to Hazard Related Losses

Objective 3.1: Reduce damage to property from an earthquake event.

3.1.1: Adopt/maintain building codes to meet required earthquake standards.

3.1.2: Abate escarpment along the East Palm Canyon corridor.

Objective 3.2: Reduce flood and storm related losses.

3.2.1: Provide for better collection of data related to severe weather events.

3.2.2: Reduce localized flooding within the City's storm drain systems.

3.2.2.1: Implement better drainage to accommodate heavy rains that cause flooding.

Objective 3.3: Reduce hazards that adversely impact the agricultural industry.

3.3.1: Promote and protect the viability of agriculture and further the County's economic development goals.

3.3.1.1: Control invasive species.

3.3.1.2: Identify and lessen severe heat impacts.

~~Objective 3.4: Minimize the impact to the City due to reoccurring drought conditions that impact both ground water supply.~~

~~3.4.1: Develop an integrated City water management plan and groundwater management plan for the City of Cathedral City.~~

Objective 3.5: Minimize the impact to vulnerable populations within the community that may be affected by severe weather-related events, such as long duration heat waves, winter storms, and wind events.

3.5.1: Maintain community response plans, such as cooling centers, during a heat wave.

3.5.2: Maintain community response plans during winter storms to assist the vulnerable population.

3.5.3: Maintain community response plans during severe wind events to assist the vulnerable population.

❖ **Goal 4:** Provide Protection for Critical Facilities, Utilities, and Services from Hazard Impacts.

❖ **Goal 5:** Maintain Coordination of Disaster Planning.

Objective 5.1: Coordinate with changing DHS/FEMA needs.

5.1.1: National Incident Management System (NIMS).

5.1.2: Disaster Mitigation Act (DMA) planning.

5.1.3: Emergency Operations plans.

Objective 5.2: Coordinate with community plans.

5.2.1: General plans.

5.2.2: Drought plans.

5.2.3: Drainage plans.

5.2.4: Intergovernmental agency disaster planning.

Objective 5.3: Maximize the use of shared resources between Cathedral City and surrounding agencies for mitigation/communication.

5.3.1: Maintain Mutual/Automatic Aid agreements with adjacent Cathedral City agencies.

Objective 5.4: Standardize systems among agencies to provide for better interoperability.

5.4.1: Standardize communication technology and language.

❖ **Goal 6:** Maintain/Provide for FEMA Eligibility and Work to Position City Departments and Community Partners for Grant Funding.

7.2 MITIGATION ACTIONS

Cathedral City has many on-going mitigation programs that help create a more disaster-resistant region. The following list highlights those programs identified as Existing Programs in the mitigation strategy spreadsheet. Others are on-going programs that are currently underfunded. It is Cathedral City's priority to find additional funding to sustain these on-going programs over time:

- Vulnerability assessments of City facilities and infrastructure.
- Non-structural mitigation for building contents.
- Continued C.E.R.T. and Teen C.E.R.T. courses.

Coordination with the State Division of Safety of Dams to ensure that cities and counties are aware of the timeline for the maintenance and inspection of dams whose failure would impact Cathedral City.

7.3 ON-GOING MITIGATION STRATEGY PROGRAMS

Cathedral City's Management Team will prioritize specific mitigation tasks for the next 5 years. This list will include an implementation process, funding strategy, responsible agency, and approximate time frame.

Replace Storm Drains on various Streets

Issue/Background: The 24 and 15 inch storm drain lines in streets have collapsed causing street flooding that is damaging the asphalt streets and threatens private property during rain events.

Other Alternatives: None

Responsible Office: City Engineer

Priority (High, Medium, Low): High

Cost Estimate: \$192,000

Potential Funding: FEMA Pre-Disaster Mitigation grants

Benefits (Avoided Losses): Elimination of street flooding will reduce water damage to the asphalt street (estimate replacement cost of \$196,000) and possible damage to private property (homes, apartments, and professional offices).

Schedule: 12 months after funding secured

Move forward with bridge across the Whitewater Channel at Cathedral Canyon Drive

Background: The Whitewater Channel Crossing at Cathedral Canyon Dr. historically has presented as a flood hazard, restricting evacuation efforts from the south end of the City. Culverts were installed, but provide little relief during heavy snow pack and rainfall years. A bridge is necessary to provide and maintain an evacuation route and to prevent continued erosion of the roadway.

Other Alternatives: None

Responsible Office: City Engineer, City Planner

Priority (High, Medium, Low): High

The cost estimate for this project is \$ 2.2M. \$600,000 will be paid by Cathedral City, and the balance is funded by the Federal Highway Traffic Safety Administration (Dept. of Transportation).

Benefits of this project (avoided losses) are the cost savings of roadway erosion repairs, and potential losses from slowed evacuations from the south-end of the city during a major event.

This project is scheduled to for completion in 2018.

7.4 FUTURE MITIGATION STRATEGIES

The City of Cathedral City and City of Rancho Mirage, in partnership with CVAG, are in discussion and planning for abatement of the Highway 111 escarpment (described in Section 1.6).

SECTION 8.0 - PLAN IMPLEMENTATION AND MAINTENANCE PROCESS

The Plan Implementation and Maintenance section details the formal process that will ensure that the Cathedral City Local Hazard Mitigation Plan remains a relevant document and will be updated as Federal, State and Local regulations and guidelines change and a complete maintenance view of the plan shall occur every 5 years.

In addition, this section describes how Cathedral City will integrate public participation throughout the plan maintenance and implementation process.

IMPLEMENTATION

The plan will be implemented upon FEMA approval and adoption by Cathedral's City Council. It is the goal of Cathedral City to assimilate mitigation strategies into the day-to-day functions. Priorities will be achieved by monitoring agendas, attending public meetings and review programs and policies that pertain to mitigation strategies.

MAINTENANCE PROCESS

Cathedral City will monitor and evaluate the plan's implementation and update as progress changes in mitigation actions, priorities change or Federal, State or local regulations and codes change. The City's Battalion Chief Emergency Manager will continue to monitor and maintain this document into the future.

Maintenance Schedule

Reviewed annually and updated as necessary with a complete update every five years. Achieved by the following:

- Attending all Operational Area Planning Committee Local Hazard Mitigation meetings that will provide the City relevant information, tools and templates to update plan.
- The Cathedral City planning team will review goals and objectives to address priorities and make change as necessary.

- Plan will be available for public comment during the review process.
- New studies and data will be included in update.
- Hazards and risks will be reviewed to determine if the priorities or risks have changed.
- Review of existing and new resources for capital improvement projects.
- Provide updates on prior mitigation proposals and actions.

Changes will be made to the plan to accommodate for actions that are no longer relevant due to shifting agendas, funding or no longer considered feasible.

SECTION 9.0 - INCORPORATION INTO EXISTING PLANNING MECHANISMS

Cathedral City and the County have several planning mechanisms which incorporate the:

- General plan safety element (City General Plan Update 2017-2019)
- Capital Improvements Plan
- Riverside County Community Action Plan
- Riverside County Strategic Vision
- Title 8 – Buildings and Construction Codes
 - Chapter 8.02 California Building Standard Code
 - Chapter 8.04 California Building Code 2016 Edition
 - Chapter 8.12 California Fire Code 2016 Edition
 - Chapter 8.24 Floodplain Management
 - Chapter 8.50 Sewer Connections
 - Chapter 8.57 Water Efficient Landscape
- Title 15 Water and Sewers
 - Chapter 15.10 Storm Water Management and Discharge Controls

The County has a Safety Element in its General Plan that includes a discussion of fire, earthquake, flooding, and landslide hazards. This plan was adopted as an implementation appendix to the Safety Element. In addition, the County enforces the requirements of the California Environmental Quality Act (CEQA), which, since 1988, requires mitigation for identified natural hazards. The County has used these pre-existing programs as a basis for identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

(See Figure 6.1.1- Cathedral City's Regulatory Mitigation Capabilities, Page 28)

SECTION 10.0 - CONTINUED PUBLIC INVOLVEMENT

Cathedral City is dedicated to directly involving the public in the continual reviewing and updating of the Local Hazard Mitigation Plan. We will continue to involve the public by announcement through community outreach, public meetings and official website to allow the public to have the opportunity to provide feedback about the plan.

APPENDIX C –

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